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10/530,349  
CA STRUC. SEARCH  
Compds. cl 2+3

3/1/07, R&A.  
3/2/07

=> s 118  
L19 1 L18

=> d his

(FILE 'HOME' ENTERED AT 13:06:09 ON 01 MAR 2007)

FILE 'REGISTRY' ENTERED AT 13:06:20 ON 01 MAR 2007

L1 STRUCTURE uploaded  
L2 0 S 530349Z1  
L3 15 S L1 FULL

FILE 'CAPLUS' ENTERED AT 13:07:48 ON 01 MAR 2007

L4 9 S L3  
L5 12059 S ANTIREFLECTIVE OR ANTI-REFLECTIVE  
L6 1 S L4 AND L5  
L7 STRUCTURE uploaded  
L8 0 S 530349Z2  
S L7

FILE 'REGISTRY' ENTERED AT 13:13:04 ON 01 MAR 2007

L9 0 S L7 FULL

FILE 'CAPLUS' ENTERED AT 13:13:05 ON 01 MAR 2007

L10 0 S L9 FULL  
L11 STRUCTURE uploaded  
L12 0 S 530349Z3  
S L11

FILE 'REGISTRY' ENTERED AT 13:13:59 ON 01 MAR 2007

L13 1 S L11 FULL

FILE 'CAPLUS' ENTERED AT 13:14:01 ON 01 MAR 2007

L14 1 S L13 FULL

FILE 'CAPLUS' ENTERED AT 13:14:18 ON 01 MAR 2007

L15 1 S L14  
L16 0 S L5 AND L14

FILE 'REGISTRY' ENTERED AT 13:37:58 ON 01 MAR 2007

L17 STRUCTURE uploaded  
L18 2 S L17 FULL

FILE 'CAPLUS' ENTERED AT 13:39:01 ON 01 MAR 2007

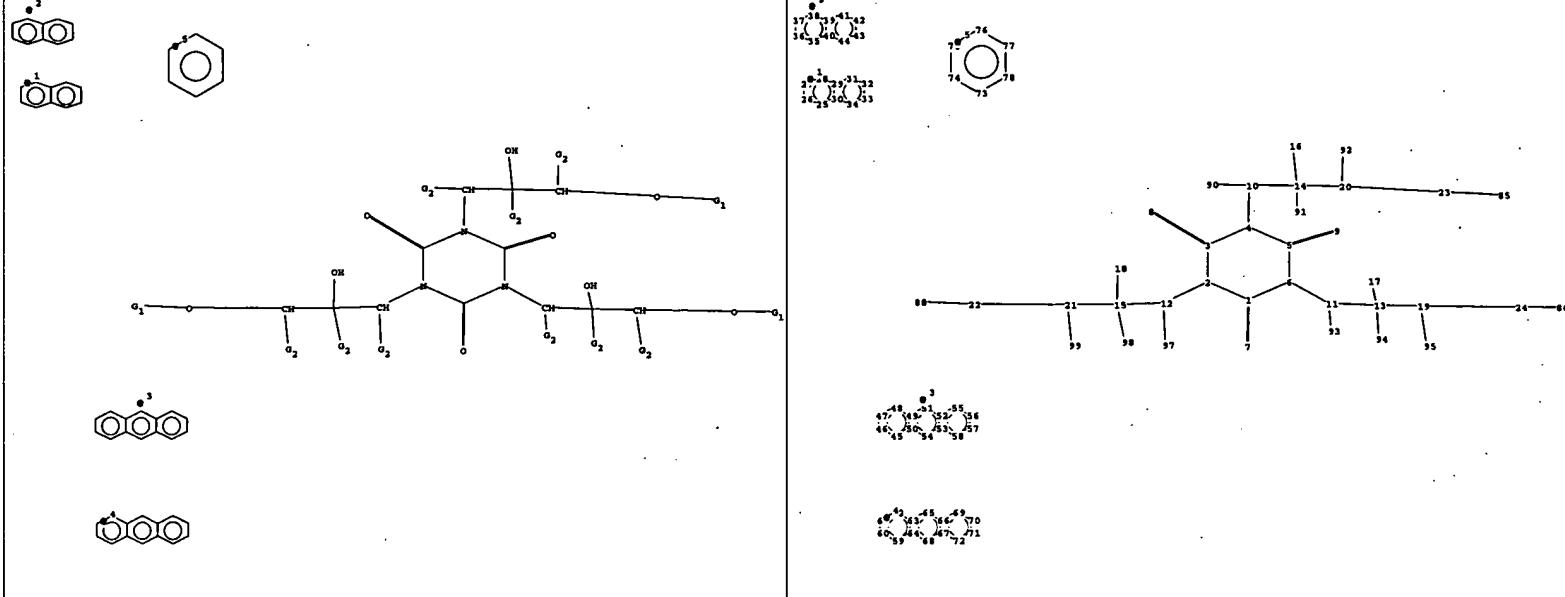
L19 1 S L18

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L19 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2004:333991 CAPLUS <<LOGINID::20070301>>  
DN 140:359011  
TI Bottom anti-reflective coatings derived from small core molecules with  
multiple epoxy moieties  
IN Neef, Charles J.; Bhave, Mandar; Fowler, Michelle; Windsor, Michelle  
PA Brewer Science, Inc., USA  
SO PCT Int. Appl., 31 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004034435	A2	20040422	WO 2003-US332091	20031007
	WO 2004034435	A3	20050728		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,  
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,



chain nodes :

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 85 86 88 90 91 92 93 94 95  
97 98 99

ring nodes :

1 2 3 4 5 6 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46  
47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72  
73 74 75 76 77 78

chain bonds :

1-7 2-12 3-8 4-10 5-9 6-11 10-14 10-90 11-13 11-93 12-15 12-97 13-17 13-19 13-94 14-16  
14-20 14-91 15-18 15-21 15-98 19-95 19-24 20-92 20-23 21-99 21-22 22-88 23-85 24-86

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 25-26 25-30 26-27 27-28 28-29 29-30 29-31 30-34 31-32 32-33 33-34  
35-36 35-40 36-37 37-38 38-39 39-40 39-41 40-44 41-42 42-43 43-44 45-46 45-50 46-47 47-48  
48-49 49-50 49-51 50-54 51-52 52-53 52-55 53-54 53-58 55-56 56-57 57-58 59-60 59-64 60-61  
61-62 62-63 63-64 63-65 64-68 65-66 66-67 66-69 67-68 67-72 69-70 70-71 71-72 73-74 73-78  
74-75 75-76 76-77 77-78

exact/norm bonds :

1-2 1-6 1-7 2-3 2-12 3-4 3-8 4-5 4-10 5-6 5-9 6-11 10-90 11-93 12-97 13-17 13-94 14-16  
14-91 15-18 15-98 19-95 19-24 20-92 20-23 21-99 21-22 22-88 23-85 24-86

exact bonds :

10-14 11-13 12-15 13-19 14-20 15-21

normalized bonds :

25-26 25-30 26-27 27-28 28-29 29-30 29-31 30-34 31-32 32-33 33-34 35-36 35-40 36-37 37-38  
38-39 39-40 39-41 40-44 41-42 42-43 43-44 45-46 45-50 46-47 47-48 48-49 49-50 49-51 50-54  
51-52

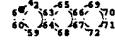
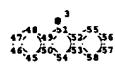
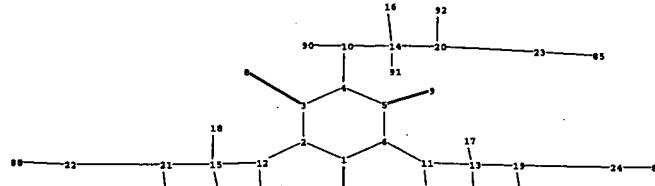
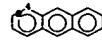
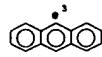
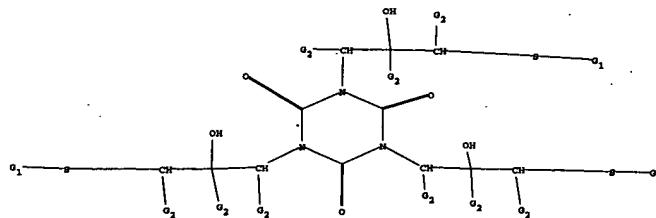
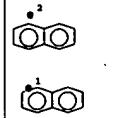
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64-68 65-66 66-67 66-69 67-68 67-72 69-70 70-71 71-72 73-74 73-78 74-75 75-76 76-77 77-78

G1:[\*1],[\*2],[\*3],[\*4],[\*5]

G2:H,CH3,Et

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS8:CLASS9:CLASS10:CLASS11:CLASS12:CLASS  
13:CLASS14:CLASS15:CLASS16:CLASS17:CLASS18:CLASS19:CLASS20:CLASS21:CLASS22:CLASS  
23:CLASS24:CLASS25:Atom 26:Atom 27:Atom 28:Atom 29:Atom 30:Atom 31:Atom 32:Atom 33:Atom  
34:Atom 35:Atom 36:Atom 37:Atom 38:Atom 39:Atom 40:Atom 41:Atom 42:Atom 43:Atom 44:Atom  
45:Atom 46:Atom 47:Atom 48:Atom 49:Atom 50:Atom 51:Atom 52:Atom 53:Atom 54:Atom 55:Atom  
56:Atom 57:Atom 58:Atom 59:Atom 60:Atom 61:Atom 62:Atom 63:Atom 64:Atom 65:Atom 66:Atom  
67:Atom 68:Atom 69:Atom 70:Atom 71:Atom 72:Atom 73:Atom 74:Atom 75:Atom 76:Atom 77:Atom  
78:Atom 85:CLASS86:CLASS88:CLASS90:CLASS91:CLASS92:CLASS93:CLASS94:CLASS95:CLASS  
97:CLASS98:CLASS99:CLASS



chain nodes :

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 85 86 88 90 91 92 93 94 95  
97 98 99

ring nodes :

1 2 3 4 5 6 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46  
47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72  
73 74 75 76 77 78

chain bonds :

1-7 2-12 3-8 4-10 5-9 6-11 10-14 10-90 11-13 11-93 12-15 12-97 13-17 13-19 13-94 14-16  
14-20 14-91 15-18 15-21 15-98 19-95 19-24 20-92 20-23 21-99 21-22 22-88 23-85 24-86

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 25-26 25-30 26-27 27-28 28-29 29-30 29-31 30-34 31-32 32-33 33-34  
35-36 35-40 36-37 37-38 38-39 39-40 39-41 40-44 41-42 42-43 43-44 45-46 45-50 46-47 47-48  
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61-62 62-63 63-64 63-65 64-68 65-66 66-67 66-69 67-68 67-72 69-70 70-71 71-72 73-74 73-78  
74-75 75-76 76-77 77-78

exact/norm bonds :

1-2 1-6 1-7 2-3 2-12 3-4 3-8 4-5 4-10 5-6 5-9 6-11 10-90 11-93 12-97 13-17 13-94 14-16  
14-91 15-18 15-98 19-95 19-24 20-92 20-23 21-99 21-22 22-88 23-85 24-86

exact bonds :

10-14 11-13 12-15 13-19 14-20 15-21

normalized bonds :

25-26 25-30 26-27 27-28 28-29 29-30 29-31 30-34 31-32 32-33 33-34 35-36 35-40 36-37 37-38  
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51-52

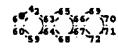
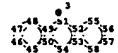
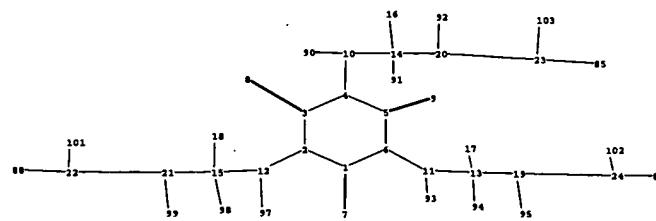
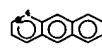
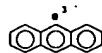
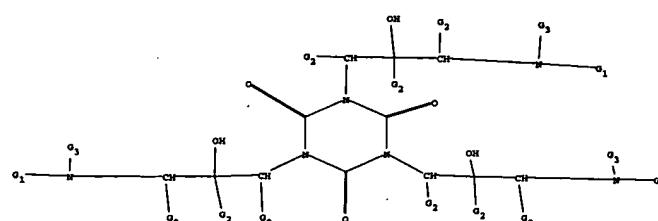
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64-68 65-66 66-67 66-69 67-68 67-72 69-70 70-71 71-72 73-74 73-78 74-75 75-76 76-77 77-78

G1:[\*1],[\*2],[\*3],[\*4],[\*5]

G2:H,CH<sub>3</sub>,Et

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1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS8:CLASS9:CLASS10:CLASS11:CLASS12:CLASS13:CLASS14:CLASS15:CLASS16:CLASS17:CLASS18:CLASS19:CLASS20:CLASS21:CLASS22:CLASS23:CLASS24:CLASS25:Atom 26:Atom 27:Atom 28:Atom 29:Atom 30:Atom 31:Atom 32:Atom 33:Atom34:Atom 35:Atom 36:Atom 37:Atom 38:Atom 39:Atom 40:Atom 41:Atom 42:Atom 43:Atom 44:Atom45:Atom 46:Atom 47:Atom 48:Atom 49:Atom 50:Atom 51:Atom 52:Atom 53:Atom 54:Atom 55:Atom56:Atom 57:Atom 58:Atom 59:Atom 60:Atom 61:Atom 62:Atom 63:Atom 64:Atom 65:Atom 66:Atom67:Atom 68:Atom 69:Atom 70:Atom 71:Atom 72:Atom 73:Atom 74:Atom 75:Atom 76:Atom 77:Atom78:Atom 85:CLASS86:CLASS88:CLASS90:CLASS91:CLASS92:CLASS93:CLASS94:CLASS95:CLASS97:CLASS98:CLASS99:CLASS



chain nodes :

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 85 86 88 90 91 92 93 94 95  
97 98 99 101 102 103

ring nodes :

1 2 3 4 5 6 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46  
47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72  
73 74 75 76 77 78

chain bonds :

1-7 2-12 3-8 4-10 5-9 6-11 10-14 10-90 11-13 11-93 12-15 12-97 13-17 13-19 13-94 14-16  
14-20 14-91 15-18 15-21 15-98 19-95 19-24 20-92 20-23 21-99 21-22 22-88 22-101 23-85 23-103  
24-86 24-102

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 25-26 25-30 26-27 27-28 28-29 29-30 29-31 30-34 31-32 32-33 33-34  
35-36 35-40 36-37 37-38 38-39 39-40 39-41 40-44 41-42 42-43 43-44 45-46 45-50 46-47 47-48  
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61-62 62-63 63-64 63-65 64-68 65-66 66-67 66-69 67-68 67-72 69-70 70-71 71-72 73-74 73-78  
74-75 75-76 76-77 77-78

exact/norm bonds :

1-2 1-6 1-7 2-3 2-12 3-4 3-8 4-5 4-10 5-6 5-9 6-11 10-90 11-93 12-97 13-17 13-94 14-16  
14-91 15-18 15-98 19-95 19-24 20-92 20-23 21-99 21-22 22-88 22-101 23-85 23-103 24-86  
24-102

exact bonds :

10-14 11-13 12-15 13-19 14-20 15-21

normalized bonds :

25-26 25-30 26-27 27-28 28-29 29-30 29-31 30-34 31-32 32-33 33-34 35-36 35-40 36-37 37-38  
38-39 39-40 39-41 40-44 41-42 42-43 43-44 45-46 45-50 46-47 47-48 48-49 49-50 49-51 50-54  
51-52 52-53 52-55 53-54 53-58 55-56 56-57 57-58 59-60 59-64 60-61 61-62 62-63 63-64 63-65  
64-68 65-66 66-67 66-69 67-68 67-72 69-70 70-71 71-72 73-74 73-78 74-75 75-76 76-77 77-78

G1:[\*1],[\*2],[\*3],[\*4],[\*5]

G2:H,CH<sub>3</sub>,Et

G3:CH<sub>3</sub>,H

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS8:CLASS9:CLASS10:CLASS11:CLASS12:CLASS  
13:CLASS14:CLASS15:CLASS16:CLASS17:CLASS18:CLASS19:CLASS20:CLASS21:CLASS22:CLASS  
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78:Atom 85:CLASS86:CLASS88:CLASS90:CLASS91:CLASS92:CLASS93:CLASS94:CLASS95:CLASS  
97:CLASS98:CLASS99:CLASS101:CLASS102:CLASS103:CLASS

L4 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2007:88487 CAPLUS  
DN 146:164746  
TI Nanotextured surfaces and super-hydrophobic crosslinkable compositions for  
their formation  
IN Guire, Patrick; Taton, Kristin; Wen, Jie; Lawin, Laurie R.  
PA Innovative Surface Technologies, LLC, USA  
SO PCT Int. Appl., 85pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2007011731	A2	20070125	WO 2006-US27378	20060714
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

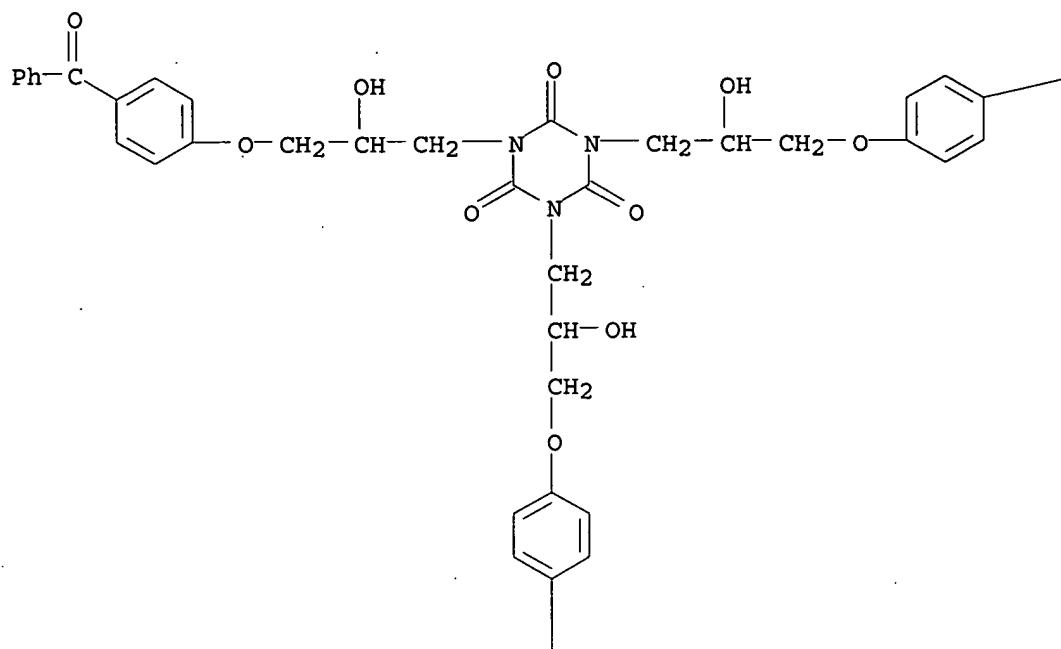
PRAI US 2005-699200P P 20050714  
US 2006-807143P P 20060712  
US 2006-457170 A 20060713

AB The invention describes novel compns. that include a crosslinking compound,  
a polymer and a 1 nm to about a 25  $\mu$  sized particle optionally with an  
oxide layer. In particular, the particle is a silica and one which has  
been pretreated with a silane. Thus, a crosslinking compound was prepared  
from triglycidyl isocyanate and 4-hydroxybenzophenone by etherification.

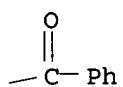
IT 917248-81-8P 920017-65-8P  
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);  
USES (Uses)  
(photocuring catalyst; manufacture of super-hydrophobic photo-crosslinkable  
compns. for forming nanotextured surfaces)

RN 917248-81-8 CAPLUS  
CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-(4-benzoylphenoxy)-2-  
hydroxypropyl] - (CA INDEX NAME)

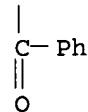
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PAGE 1-B

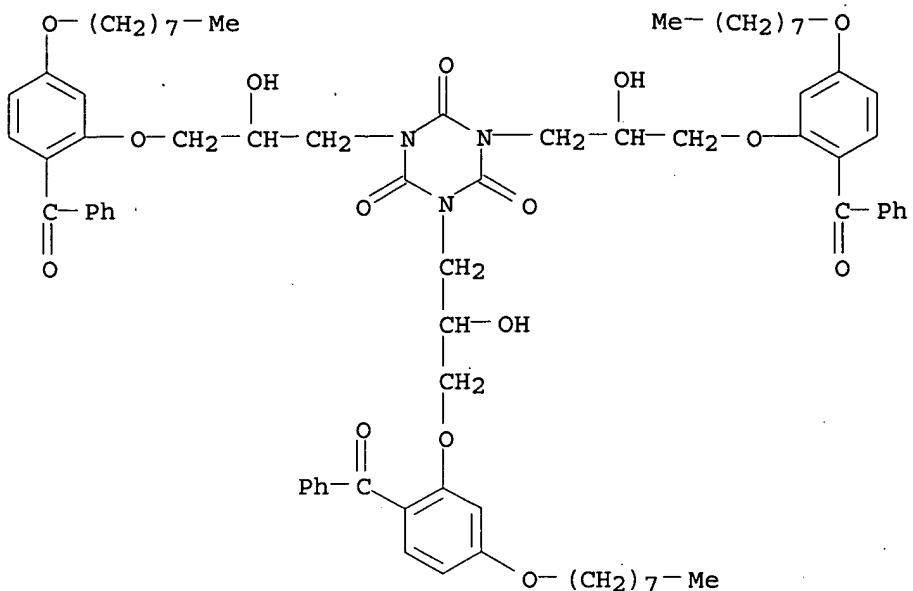


PAGE 2-A



RN 920017-65-8 CAPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-[2-benzoyl-5-(octyloxy)phenoxy]-2-hydroxypropyl]- (CA INDEX NAME)



L4 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:1338625 CAPLUS

DN 146:82306

TI Hydrophilic photochemical crosslinkers for use in surface coatings

IN Guire, Patrick; Taton, Kristin; Wen, Jie

PA Innovative Surface Technologies, LLC, USA

SO PCT Int. Appl., 87pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006135910	A1	20061221	WO 2006-US23058	20060613
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

US 2007003707 A1 20070104 US 2006-423503 20060612

PRAI US 2005-690018P P 20050613

US 2005-709330P P 20050818

US 2006-804222P P 20060608

US 2006-423503 A 20060612

AB Crosslinking compds. containing  $\geq 1$  photoactivatable moieties and hydrophilic moieties are prepared

IT 917248-81-8P

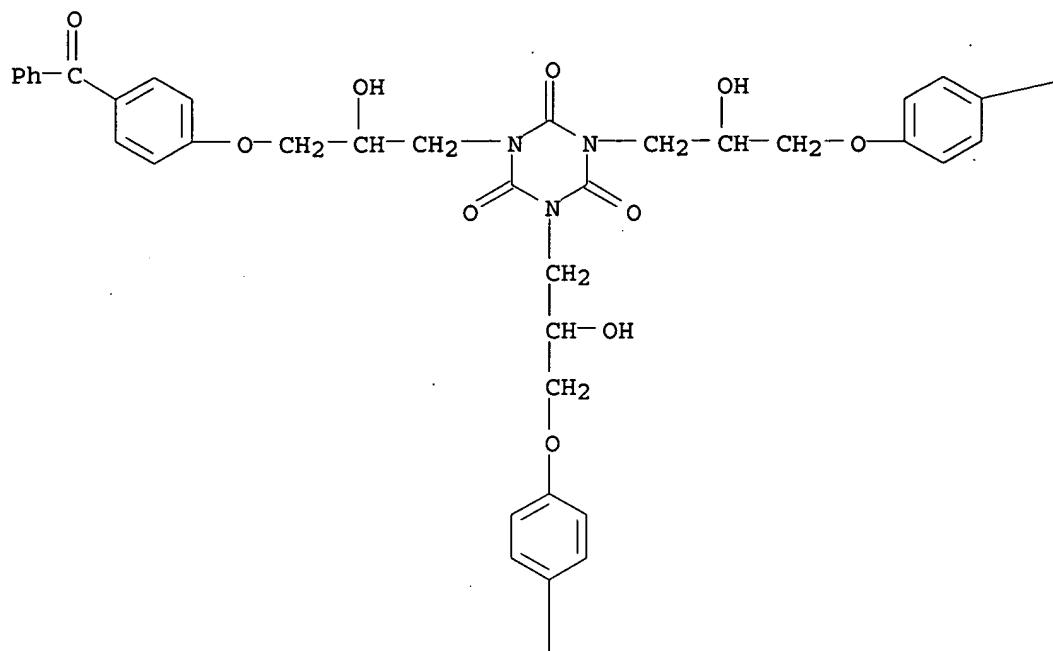
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(hydrophilic photochem. crosslinkers for use in surface coatings)

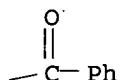
RN 917248-81-8 CAPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-(4-benzoylphenoxy)-2-hydroxypropyl]- (CA INDEX NAME)

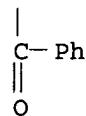
PAGE 1-A



PAGE 1-B



PAGE 2-A



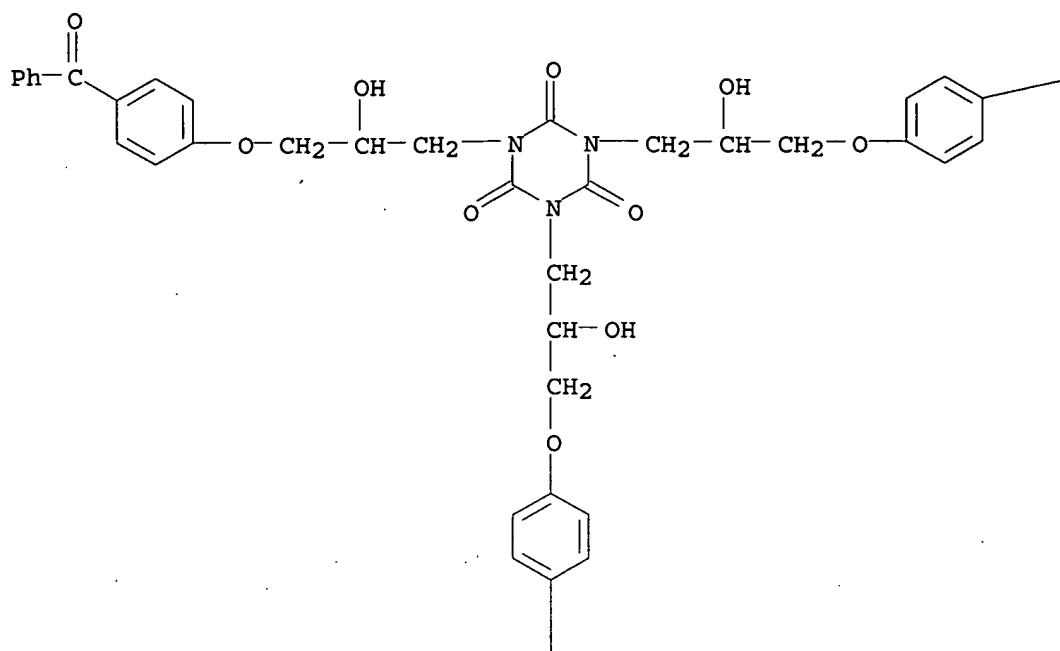
IT 917249-08-2P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(hydrophilic photochem. crosslinkers for use in surface coatings)  
RN 917249-08-2 CAPLUS  
CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-(4-benzoylphenoxy)-2-hydroxypropyl]-, polymer with 1-ethenyl-2-pyrrolidinone and 2-oxepanone (CA INDEX NAME)

CM 1

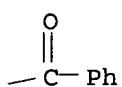
CRN 917248-81-8

CMF C51 H45 N3 O12

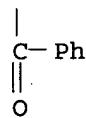
PAGE 1-A



PAGE 1-B

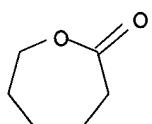


PAGE 2-A



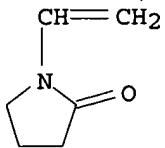
CM 2

CRN 502-44-3  
CMF C<sub>6</sub> H<sub>10</sub> O<sub>2</sub>



CM 3

CRN 88-12-0  
CMF C<sub>6</sub> H<sub>9</sub> N O

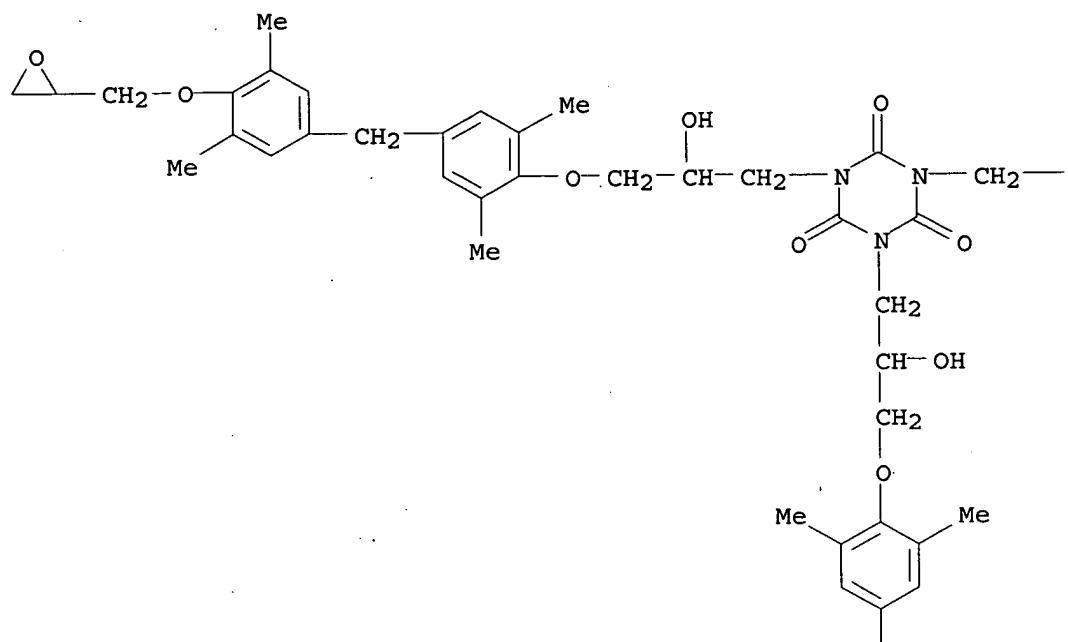


RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

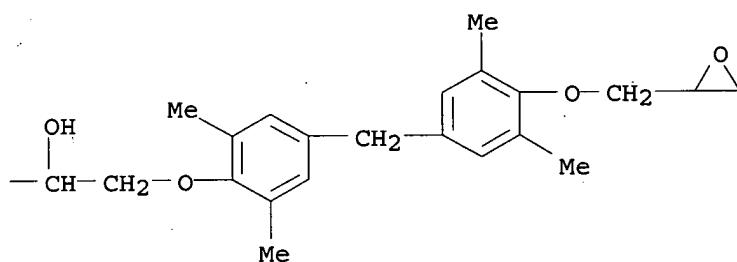
L4 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:232600 CAPLUS  
 DN 144:294012  
 TI Epoxy resin compositions containing no phosphorus, halogens, and antimony oxide and electronic parts sealed with them with excellent fire resistance and reliability  
 IN Hosokawa, Haruomi; Tanaka, Masashi  
 PA Kyocera Chemical Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2006070199	A	20060316	JP 2004-257014	20040903
PRAI JP 2004-257014		20040903		
OS MARPAT 144:294012				
AB	The compns. contain tri-R-substituted s-triazinetrione (A; R = CH <sub>2</sub> CH <sub>2</sub> C(OH)CH <sub>2</sub> OQ <sub>1</sub> XQ <sub>2</sub> OG; G = glycidyl; Q <sub>1</sub> = 2-R <sub>1</sub> -6-R <sub>2</sub> -1,4-phenylene; Q <sub>2</sub> = 3-R <sub>1</sub> -5-R <sub>2</sub> -1,4-phenylene; R <sub>1,2</sub> = H, alkyl; X = divalent group), phenolic resins, and 60-90% inorg. fillers. Thus, a composition containing A (Q <sub>1</sub> = 2,6-di-Me-1,4-phenylene; Q <sub>2</sub> = 3,5-di-Me-1,4-phenylene; X = CH <sub>2</sub> ) 10, novolak 3.5, and silica 85% was transfer-molded to give a test piece with fire resistance (UL 94) V-0 and good heat resistance at 175°.			
IT	879210-87-4DP, reaction products with phenolic resins RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (semiconductor devices sealed with polyisocyanurate-based epoxy resin compns. with good fire and heat resistance)			
RN	879210-87-4 CAPLUS			
CN	1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-[4-[[3,5-dimethyl-4-(oxiranylmethoxy)phenyl]methyl]-2,6-dimethylphenoxy]-2-hydroxypropyl]-(9CI) (CA INDEX NAME)			

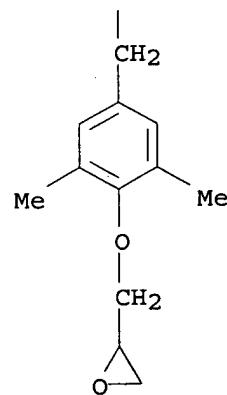
PAGE 1-A



PAGE 1-B



PAGE 2-A



DN 137:343892  
 TI Composition containing tris(hydroxyalkyl)isocyanurate-containing polymer  
 for forming antireflection film for lithography  
 IN Kishioka, Takahiro; Arase, Shinya; Mizusawa, Kenichi  
 PA Nissan Chemical Industries, Ltd., Japan  
 SO PCT Int. Appl., 29 pp.  
 CODEN: PIXXD2

DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002086624	A1	20021031	WO 2002-JP3576	20020410
	W: CN, JP, KR, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	EP 1378796	A1	20040107	EP 2002-717099	20020410
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
	CN 1502062	A	20040602	CN 2002-807941	20020410
	TW 225187	B	20041211	TW 2002-91107247	20020410
	JP 3804792	B2	20060802	JP 2002-584088	20020410
	US 2004110096	A1	20040610	US 2003-472695	20030924
	US 2006216652	A1	20060928	US 2006-444392	20060601

PRAI JP 2001-111230 A 20010410  
 WO 2002-JP3576 W 20020410  
 US 2003-472695 A3 20030924

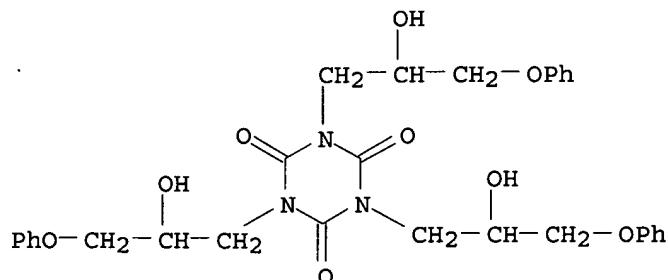
AB A composition for forming an antireflection film for use in a lithog. process  
 for semiconductor device production, which contains as a component a resin  
 containing structural units derived from cyanuric acid, a derivative thereof,  
 or

both. The structural units are preferably tris(hydroxyalkyl)isocyanurate  
 represented by I (R1-3 = H, halo, C1-10 alkyl, benzene derivative, etc.). The  
 antireflection film for lithog. obtained from the composition has a high  
 reflection-preventive effect and does not cause intermixing with a resist  
 layer to give an excellent resist pattern. It has higher selectivity in  
 dry etching than the resist.

IT 17989-80-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (composition for forming antireflection film for lithog.)

RN 17989-80-9 CAPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris(2-hydroxy-3-  
 phenoxypropyl)- (9CI) (CA INDEX NAME)

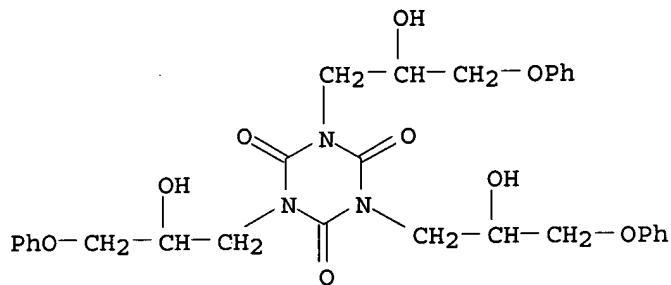


IT 474094-64-9P, 2-Hydroxypropyl methacrylate-  
 hexa(methoxymethyl)melamine-1,3,5-Triazine-2,4,6(1H,3H,5H)-trione,  
 1,3,5-tris(2-hydroxy-3-phenoxypropyl)-copolymer  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (composition for forming antireflection film for lithog.)

RN 474094-64-9 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-hydroxypropyl ester, polymer with  
N,N,N',N',N'',N'''-hexakis(methoxymethyl)-1,3,5-triazine-2,4,6-triamine and  
1,3,5-tris(2-hydroxy-3-phenoxypropyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-  
trione (9CI) (CA INDEX NAME)

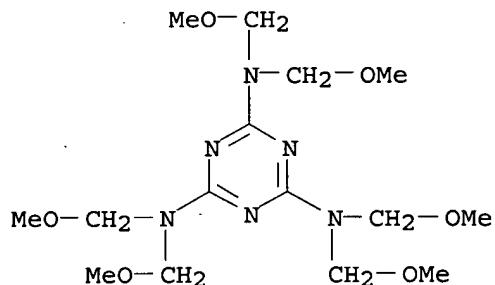
CM 1

CRN 17989-80-9  
CMF C30 H33 N3 O9



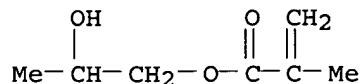
CM 2

CRN 3089-11-0  
CMF C15 H30 N6 O6



CM 3

CRN 923-26-2  
CMF C7 H12 O3



RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1994:581065 CAPLUS  
DN 121:181065  
TI NMR investigations of the possible cross reactions between cyanate and  
epoxy resins  
AU Fyfe, C. A.; Niu, J.; Rettig, S. J.; Wang, D. W.; Poliks, M. D.

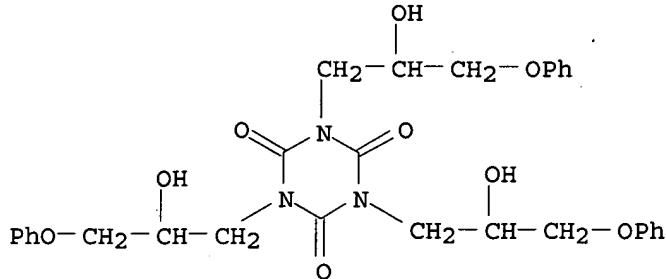
CS Dep. Chem., Univ. British Columbia, Vancouver, BC, V6T 1Z1, Can.  
SO Journal of Polymer Science, Part A: Polymer Chemistry (1994), 32(12),  
2203-21  
CODEN: JPACEC; ISSN: 0887-624X

DT Journal  
LA English

AB The possible cross reactions indicated by solid-state NMR between cyanate functionalized resin and epoxy functionalized resin were investigated by using both natural abundance and labeled monofunctional model compds. These soluble products were isolated and purified by silica gel adsorption chromatog. and gel permeation chromatog. They were fully characterized by high resolution  $^1\text{H}$ -,  $^{13}\text{C}$ -,  $^{15}\text{N}$ -NMR spectroscopy and by mass spectrometry. The major cross-reaction product is a racemic mixture of enantiomers, which contain an oxazolidinone ring formed by one cyanate mol. and two epoxy mols. However, epoxy consumption lags cyanate consumption in the overall reaction as triazine formation from the cyanate is much faster than the two competing reactions, the cross reaction between cyanate and epoxy, and the self-polymerization of epoxy, under the conditions investigated. The cross reaction between cyanate and epoxy is limited. Approx. 12% of cross reaction between cyanate and epoxy was found in the overall reaction. In addition to the cross reactions of epoxy and cyanate, the reactions of epoxy and the carbamate, which is the major side product for the curing reaction of cyanate resin in solution, have also been investigated, and the mechanism of these reactions discussed. From the reactions of epoxy and carbamate, several products related to cross reaction between epoxy and cyanate have been isolated and identified. The reaction of epoxy and carbamate is one of the pathways in the overall cross reaction between epoxy and cyanate resins. Finally, the mechanism of the overall cross-curing reaction between the diepoxy and dicyanate mixed resins is discussed.

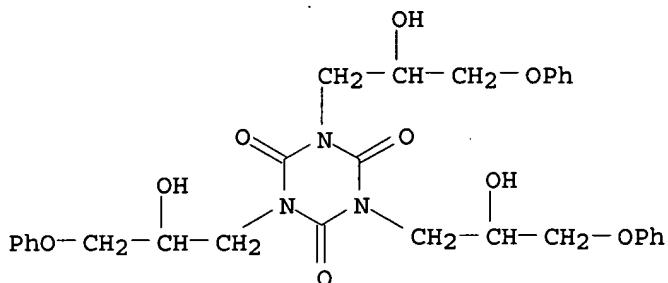
IT 17989-80-9P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(NMR studies of possible cross reactions between cyanate and epoxy resins)

RN 17989-80-9 CAPLUS  
CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris(2-hydroxy-3-phenoxypropyl)- (9CI) (CA INDEX NAME)

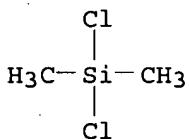


L4 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1984:491553 CAPLUS  
DN 101:91553  
TI The reaction of isocyanuric acid derivatives with dimethyldichlorosilane  
AU Eritsyan, M. L.; Karamyan, R. A.; Eritsyan, N. P.; Sagatelyan, Sh. A.; Karapetyan, K. A.  
CS Gos. Nauchno-Issled. Proektn. Inst. Polim. Kleev, Kirovakan, USSR  
SO Armyanskii Khimicheskii Zhurnal (1984), 37(3), 193-6  
CODEN: AYKZAN; ISSN: 0515-9628  
DT Journal  
LA Russian  
AB Polymerizing s-triazine OH or CO<sub>2</sub>H derivs. with Me<sub>2</sub>SiCl<sub>2</sub> at 60-100° for 1.5-2 h gave uncrosslinked polymers with mol. weight 800-2600 and softening

IT point 70-98°.  
 91601-50-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 91601-50-2 CAPLUS  
 CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris(2-hydroxy-3-  
 phenoxypropyl)-, polymer with dichlorodimethylsilane (9CI) (CA INDEX  
 NAME)  
 CM 1  
 CRN 17989-80-9  
 CMF C30 H33 N3 O9

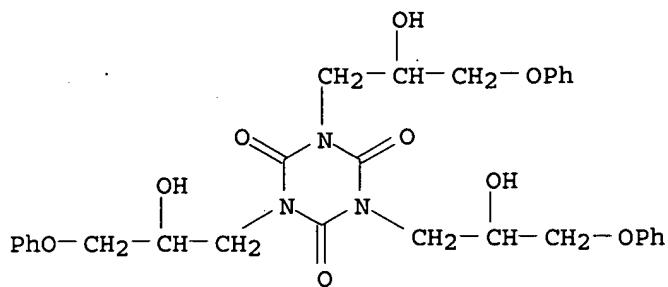


CM 2  
 CRN 75-78-5  
 CMF C2 H6 Cl2 Si



L4 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1984:184725 CAPLUS  
 DN 100:184725  
 TI Organometallic complexes based on tris-substituted derivatives of  
 isocyanuric acid  
 AU Eritsyan, M. L.; Karamyan, R. A.; Eritsyan, N. P.; Karapetyan, K. A.  
 CS Gos. Nauchno-Issled. Proektn. Inst. Polim. Kleev, Kirovakan, USSR  
 SO Koordinatsionnaya Khimiya (1984), 10(2), 195-200  
 CODEN: KOKHDC; ISSN: 0132-344X  
 DT Journal  
 LA Russian  
 AB  $[\text{CoL}_2\text{Q}_2]_n$  [HL = tris-1,3,5-(2'-hydroxy-3'-chloropropyl)isocyanuric acid  
 (I), Q = NH3; HL = tris-1,3,5-(2'-hydroxy-3'-phenoxypropyl)isocyanuric  
 acid (II), tris-1,3,5-[ (2'-hydroxy-3'-phenoxypropoxy)methyl]isocyanuric  
 acid (III), Q = NH3, Et2NH,  $\text{HN}(\text{C}_2\text{H}_4\text{OH})_2$ ] and  $[\text{CuL}_2\text{Q}_2]_n$  [HL = I, Q = NH3;  
 HL = tris-1,3,5-(hydroxymethyl)isocyanuric acid, II, III, Q = NH3, Et2NH,  
 $\text{HN}(\text{C}_2\text{H}_4\text{OH})_2$ ] were prepared and characterized by IR spectra.  $[\text{CoL}_2]_n$  and  
 $[\text{CuL}_2]_n$  were also prepared  
 IT 17989-80-9DP, cobalt and copper complexes  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 17989-80-9 CAPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris(2-hydroxy-3-phenoxypropyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1982:473406 CAPLUS

DN 97:73406

TI Light stabilizers

PA Sumitomo Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

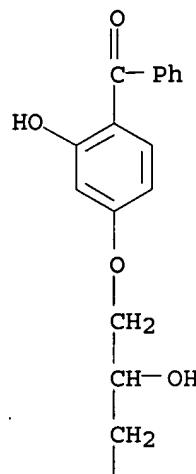
DT Patent

LA Japanese

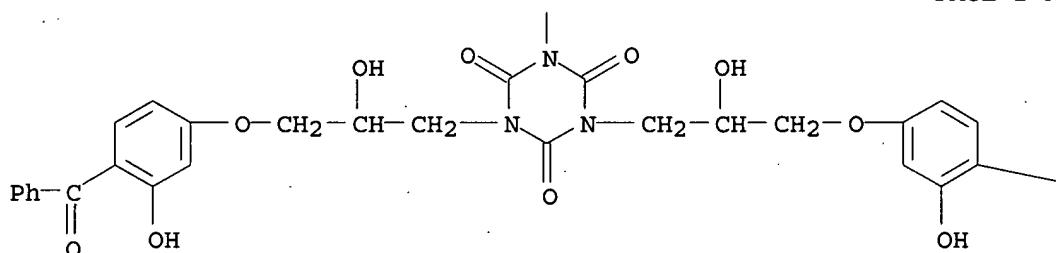
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57042742	A	19820310	JP 1980-118183	19800826
	JP 62045894	B	19870929		
PRAI	JP 1980-118183		19800826		
AB Compds. I (R = H, R1 = H [82438-55-9]; R = Ac, R1 = H [82447-33-4]; R = H, R1 = p-tert-Bu [82438-56-0]; R = H, R1 = o-Cl [82438-57-1]) are used light stabilizers for polyolefins. Thus, test pieces prepared from Noblen FS 200 [9003-07-0] containing Ca stearate 0.1%, 2,6-di-tert-butyl-4-methylphenol 0.05%, and I (R = H, R1 = H) 0.2% were irradiated for 360 h with a sunshine weatherometer before cracks formed on 1/3 of the surface, compared with 240 h for similar test pieces prepared from polymer not containing I.					
IT	82438-55-9 82438-56-0 82438-57-1				
	RL: MOA (Modifier or additive use); USES (Uses) (light stabilizers, for polypropylene)				
RN	82438-55-9 CAPLUS				
CN	1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-(4-benzoyl-3-hydroxyphenoxy)-2-hydroxypropyl]- (9CI) (CA INDEX NAME)				

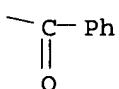
PAGE 1-A



PAGE 2-A



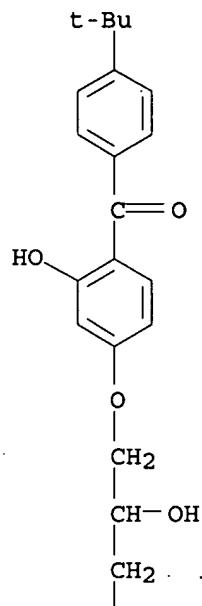
PAGE 2-B



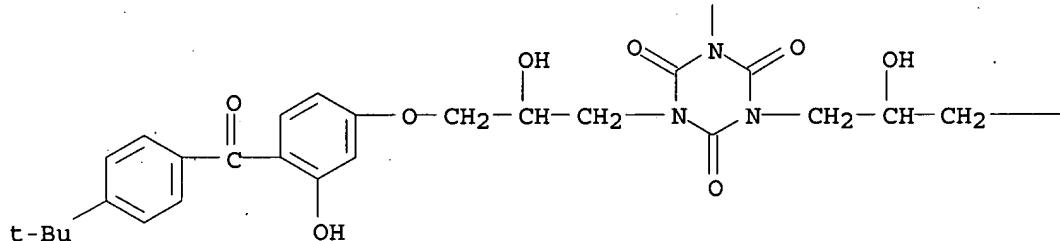
RN 82438-56-0 CAPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-[4-[4-(1,1-dimethylethyl)benzoyl]-3-hydroxyphenoxy]-2-hydroxypropyl]- (9CI) (CA INDEX NAME)

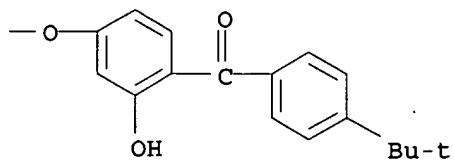
PAGE 1-A



PAGE 2-A



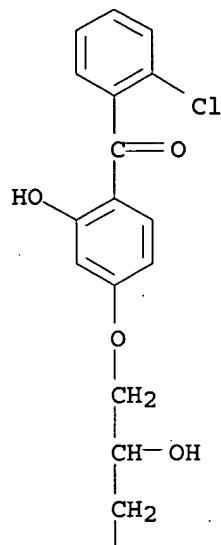
PAGE 2-B



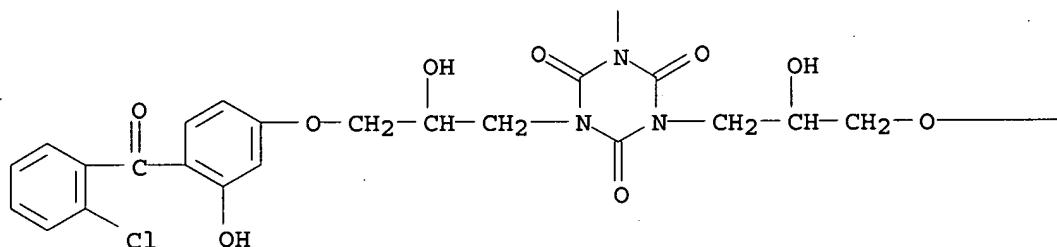
RN 82438-57-1 CAPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[3-[4-(2-chlorobenzoyl)-3-hydroxyphenoxy]-2-hydroxypropyl]- (9CI) (CA INDEX NAME)

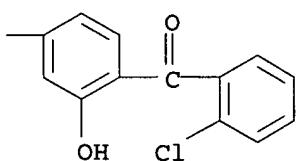
PAGE 1-A



PAGE 2-A



PAGE 2-B



L4 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1968:452532 CAPLUS  
DN 69:52532  
TI Maleate oligoesters containing isocyanuric rings  
AU Alaminov, Kh.; Mikhailov, M.; Damyanova, I.  
CS Res. Inst. Chem. Ind., Sofia, Bulg.  
SO Journal of Polymer Science, Polymer Symposia (1968), Volume Date 1967, No. 22(Pt. 1), 419-30

CODEN: JPYCAQ; ISSN: 0360-8905

DT Journal

LA English

AB A method of preparing oligoester maleates containing isocyanuric rings by copolycondensation of 3-(N-2-hydroxy-3-chloropropyl) isocyanurate (I), and of 3-N-2-hydroxy-3-phenoxypropyl) isocyanurate (II), with maleic anhydride alone or in mixts. with aliphatic or aromatic monocarboxylic and dicarboxylic acids was developed. The copolycondensations were made with maleic anhydride, with maleic and phthalic anhydride, with maleic anhydride and adipic acid, with maleic anhydride and oleic acid, and with maleic anhydride and stearic acid and were examined systematically. Oligoester maleates obtained from II have a higher temperature of dropping (dropping point) and a considerably higher thermostability than those obtained from I. The oligoester maleates obtained from I with maleic anhydride and stearic or oleic acids are soluble in styrene and aromatic hydrocarbons; those obtained with the other substances are partially soluble in styrene. All those obtained from II are soluble in styrene. The isocyanuric oligoester maleates synthesized are compatible with the com. oligoester maleates, such as those from ethylene glycol, diethylene glycol, and propylene glycol, and with their styrene solns. The hardened isocyanuric oligoester maleates have a considerably greater thermostability than com. oligomers hardened under the same conditions on an ethylene glycol, diethylene glycol, propylene glycol, or maleic anhydride base. The crosslinked polymers are flame-resistant.

IT 29434-52-4 29495-93-0 29660-16-0

RL: USES (Uses)

(fire-resistance and thermal stability of crosslinked)

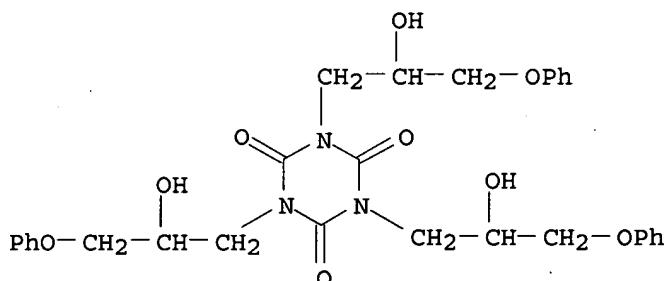
RN 29434-52-4 CAPLUS

CN Oleic acid, polyester with maleic anhydride and 1,3,5-tris(2-hydroxy-3-phenoxypropyl)-s-triazine-2,4,6(1H,3H,5H)-trione (8CI) (CA INDEX NAME)

CM 1

CRN 17989-80-9

CMF C30 H33 N3 O9

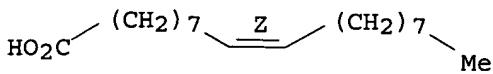


CM 2

CRN 112-80-1

CMF C18 H34 O2

Double bond geometry as shown.



CM 3

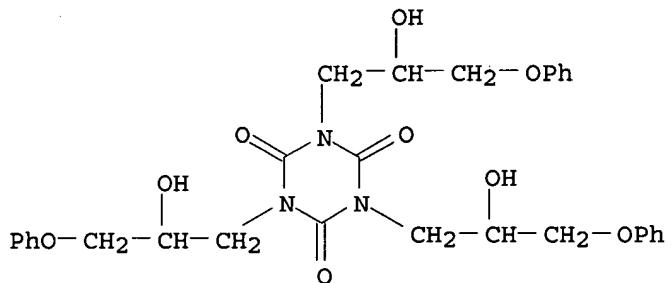
CRN 108-31-6  
CMF C4 H2 O3



RN 29495-93-0 CAPLUS  
CN Maleic anhydride, polyester with 1,3,5-tris(2-hydroxy-3-phenoxypropyl)-s-triazine-2,4,6(1H,3H,5H)-trione (8CI) (CA INDEX NAME)

CM 1

CRN 17989-80-9  
CMF C30 H33 N3 O9



CM 2

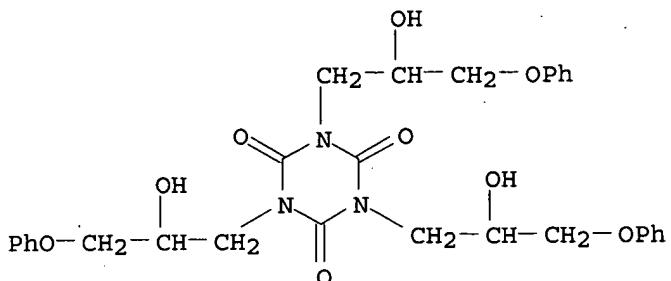
CRN 108-31-6  
CMF C4 H2 O3



RN 29660-16-0 CAPLUS  
CN Phthalic anhydride, polyester with maleic anhydride and 1,3,5-tris(2-hydroxy-3-phenoxypropyl)-s-triazine-2,4,6(1H,3H,5H)-trione (8CI) (CA INDEX NAME)

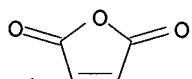
CM 1

CRN 17989-80-9  
CMF C30 H33 N3 O9



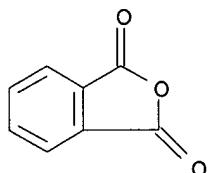
CM 2

CRN 108-31-6  
CMF C4 H2 O3



CM 3

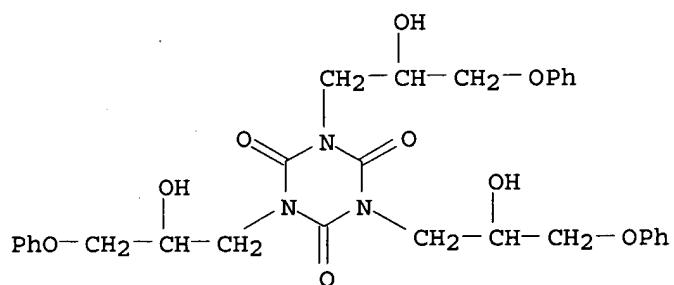
CRN 85-44-9  
CMF C8 H4 O3



IT 17989-80-9P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 17989-80-9 CAPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris(2-hydroxy-3-phenoxypropyl)- (9CI) (CA INDEX NAME)



=>

L6 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:833109 CAPLUS

DN 137:343892

TI Composition containing tris(hydroxyalkyl)isocyanurate-containing polymer for forming antireflection film for lithography

IN Kishioka, Takahiro; Arase, Shinya; Mizusawa, Kenichi

PA Nissan Chemical Industries, Ltd., Japan

SO PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002086624	A1	20021031	WO 2002-JP3576	20020410
	W: CN, JP, KR, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	EP 1378796	A1	20040107	EP 2002-717099	20020410
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
	CN 1502062	A	20040602	CN 2002-807941	20020410
	TW 225187	B	20041211	TW 2002-91107247	20020410
	JP 3804792	B2	20060802	JP 2002-584088	20020410
	US 2004110096	A1	20040610	US 2003-472695	20030924
	US 2006216652	A1	20060928	US 2006-444392	20060601

PRAI JP 2001-111230 A 20010410  
WO 2002-JP3576 W 20020410  
US 2003-472695 A3 20030924

AB A composition for forming an antireflection film for use in a lithog. process for semiconductor device production, which contains as a component a resin containing structural units derived from cyanuric acid, a derivative thereof,

or

both. The structural units are preferably tris(hydroxyalkyl)isocyanurate represented by I (R1-3 = H, halo, C1-10 alkyl, benzene derivative, etc.). The antireflection film for lithog. obtained from the composition has a high reflection-preventive effect and does not cause intermixing with a resist layer to give an excellent resist pattern. It has higher selectivity in dry etching than the resist.

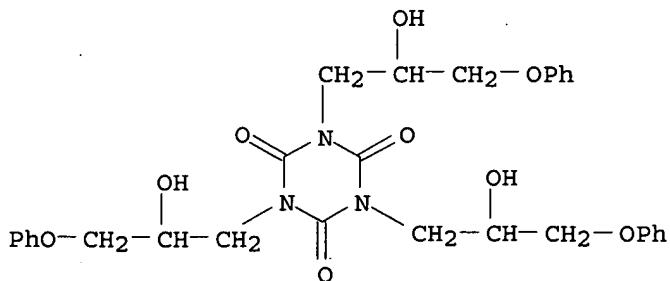
IT 17989-80-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(composition for forming antireflection film for lithog.)

RN 17989-80-9 CAPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris(2-hydroxy-3- phenoxypropyl)- (9CI) (CA INDEX NAME)



IT 474094-64-9P, 2-Hydroxypropyl methacrylate- hexa(methoxymethyl)melamine-1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris(2-hydroxy-3-phenoxypropyl)-copolymer

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(composition for forming antireflection film for lithog.)

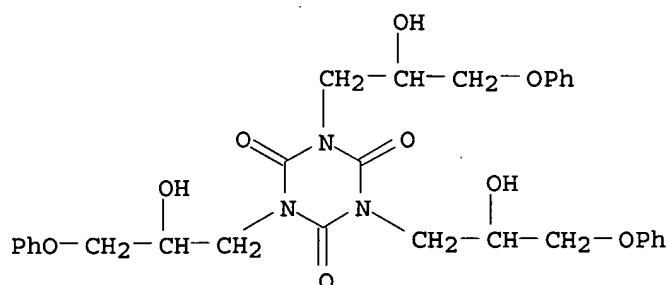
RN 474094-64-9 CAPPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxypropyl ester, polymer with  
N,N,N',N',N'',N'''-hexakis(methoxymethyl)-1,3,5-triazine-2,4,6-triamine and  
1,3,5-tris(2-hydroxy-3-phenoxypropyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-  
trione (9CI) (CA INDEX NAME)

CM 1

CRN 17989-80-9

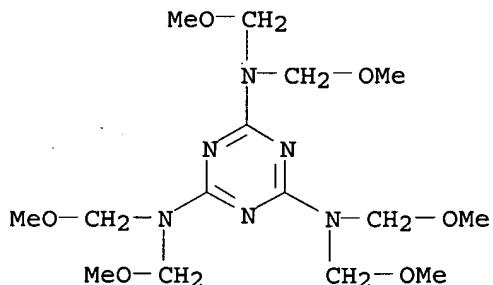
CMF C30 H33 N3 O9



CM 2

CRN 3089-11-0

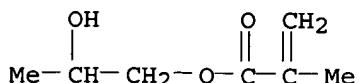
CMF C15 H30 N6 O6



CM 3

CRN 923-26-2

CMF C7 H12 O3



RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=>

L15 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2001:167980 CAPLUS

DN 134:193425

TI Processes for the preparation of optically active oxazolidinone compounds

IN Ikeda, Hisao; Takeyama, Toshiaki; Hidaka, Motohiko; Arai, Kazutaka

PA Nissan Chemical Industries, Ltd., Japan

SO PCT Int. Appl., 25 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2001016118	A1	20010308	WO 2000-JP5829	20000829
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W: CA, KR, US  
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
PT, SE

JP 2001139564 A 20010522 JP 2000-253380 20000824

PRAI JP 1999-243309 A 19990830

OS CASREACT 134:193425; MARPAT 134:193425

AB Optically active oxazolidinone compds. (I; \* represents an asym. carbon; X = O, NR<sub>3</sub>, PR<sub>3</sub>, S; R<sub>1</sub> = C<sub>1</sub>-36 organic group optionally containing ≥1 atom(s) selected from O, S, N, P; R<sub>2</sub>, R<sub>3</sub> = H, C<sub>1</sub>-36 organic group optionally containing ≥1 atom(s) selected from O, S, N, P), useful as intermediates for the preparation of β blocker, are prepared by reacting optically active tris(2,3-epoxyalkyl) isocyanurate compds. (II; \*, R<sub>2</sub> = same as above) with alcs. or amines R<sub>1</sub>XH (X, R<sub>1</sub> = same as above). Thus, KOH 140, (2R, 2R', 2R'')-tris(2,3-epoxypropyl) isocyanurate (optical purity ≥99% e.e.) 6.18 g, α-naphthol 9.0 g, and 50 mL monochlorobenzene were stirred under reflux for 2 h to give 88% (5R)-5-(1-naphthylloxymethyl)oxazolidin-2-one.

IT 328047-98-9P

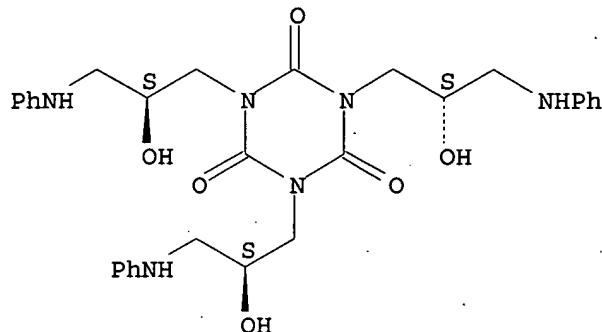
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(processes for preparation of optically active oxazolidinone compds. by reaction of optically active tris(2,3-epoxypropyl) isocyanurate with alcs. or amines)

RN 328047-98-9 CAPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[(2S)-2-hydroxy-3-(phenylamino)propyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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(FILE 'HOME' ENTERED AT 13:06:09 ON 01 MAR 2007)

FILE 'REGISTRY' ENTERED AT 13:06:20 ON 01 MAR 2007

L1           STRUCTURE uploaded  
L2           0 S 530349Z1  
L3           15 S L1 FULL

FILE 'CAPLUS' ENTERED AT 13:07:48 ON 01 MAR 2007

L4           9 S L3  
L5           12059 S ANTIREFLECTIVE OR ANTI-REFLECTIVE  
L6           1 S L4 AND L5  
L7           STRUCTURE uploaded  
L8           0 S 530349Z2  
              S L7

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FILE 'CAPLUS' ENTERED AT 13:13:05 ON 01 MAR 2007

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L11          STRUCTURE uploaded  
L12          0 S 530349Z3  
              S L11

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L13          1 S L11 FULL

FILE 'CAPLUS' ENTERED AT 13:14:01 ON 01 MAR 2007

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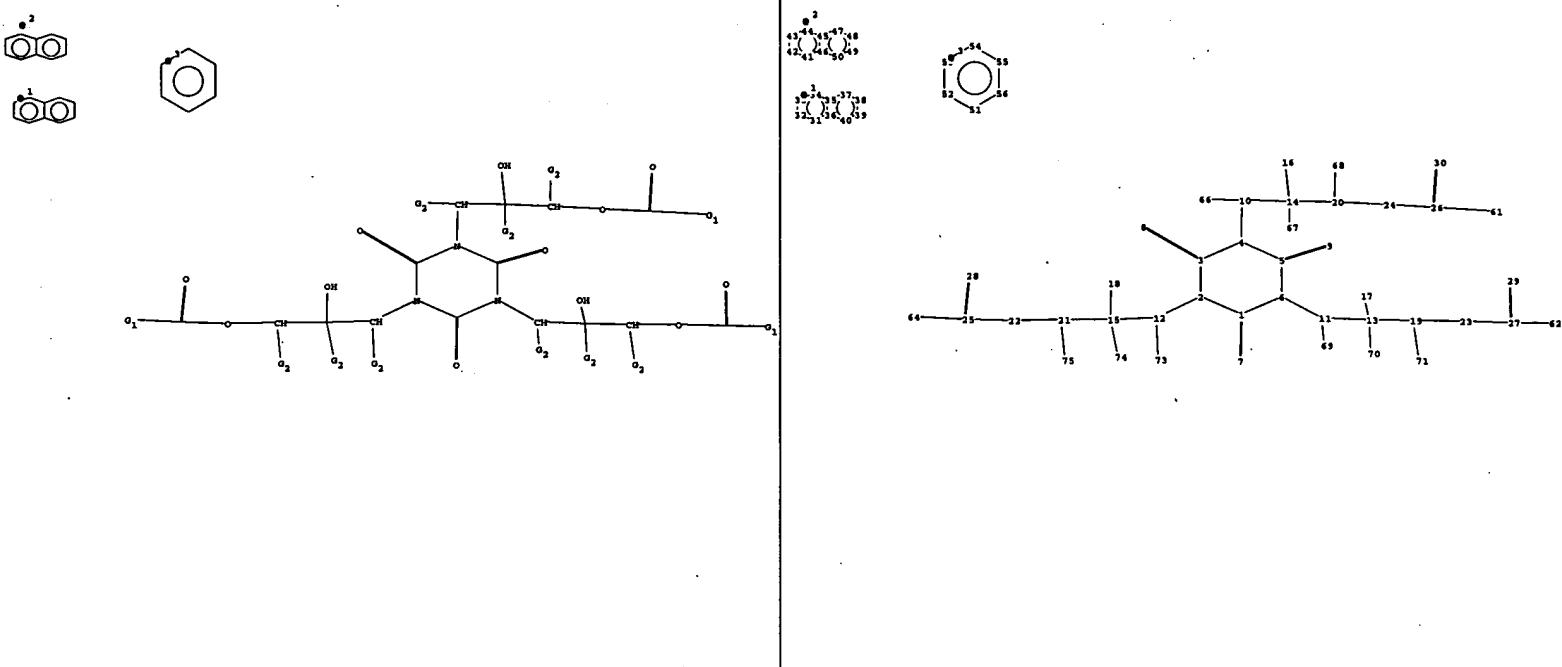
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L15          1 S L14

=> s 15 and l14

L16          0 L5 AND L14

=>



chain nodes :

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 61 62 64  
66 67 68 69 70 71 73 74 75

ring nodes :

1 2 3 4 5 6 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52  
53 54 55 56

chain bonds :

1-7 2-12 3-8 4-10 5-9 6-11 10-14 10-66 11-13 11-69 12-15 12-73 13-17 13-19 13-70 14-16  
14-20 14-67 15-18 15-21 15-74 19-23 19-71 20-24 20-68 21-22 21-75 22-25 23-27 24-26 25-28  
25-64 26-30 26-61 27-29 27-62

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 31-32 31-36 32-33 33-34 34-35 35-36 35-37 36-40 37-38 38-39 39-40  
41-42 41-46 42-43 43-44 44-45 45-46 45-47 46-50 47-48 48-49 49-50 51-52 51-56 52-53 53-54  
54-55 55-56

exact/norm bonds :

1-2 1-6 1-7 2-3 2-12 3-4 3-8 4-5 4-10 5-6 5-9 6-11 10-66 11-69 12-73 13-17 13-70 14-16  
14-67 15-18 15-74 19-23 19-71 20-24 20-68 21-22 21-75 22-25 23-27 24-26 25-28 25-64 26-30  
26-61 27-29 27-62

exact bonds :

10-14 11-13 12-15 13-19 14-20 15-21

normalized bonds :

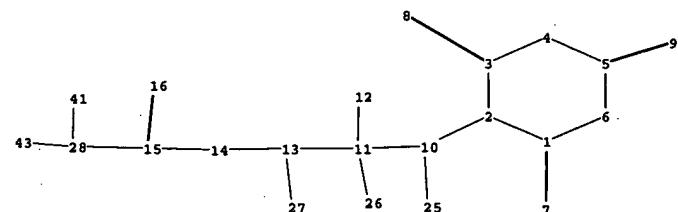
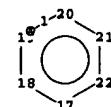
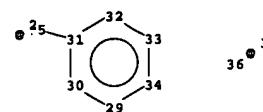
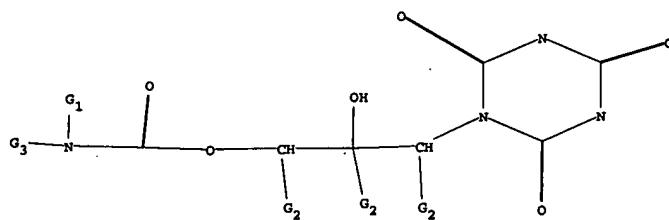
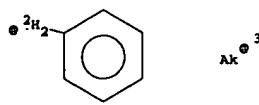
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44-45 45-46 45-47 46-50 47-48 48-49 49-50 51-52 51-56 52-53 53-54 54-55 55-56

G1:[\*1],[\*2],[\*3]

G2:H,CH3,Et

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS8:CLASS9:CLASS10:CLASS11:CLASS12:CLASS  
13:CLASS14:CLASS15:CLASS16:CLASS17:CLASS18:CLASS19:CLASS20:CLASS21:CLASS22:CLASS  
23:CLASS24:CLASS25:CLASS26:CLASS27:CLASS28:CLASS29:CLASS30:CLASS31:Atom 32:Atom 33:Atom  
34:Atom 35:Atom 36:Atom 37:Atom 38:Atom 39:Atom 40:Atom 41:Atom 42:Atom 43:Atom 44:Atom  
45:Atom 46:Atom 47:Atom 48:Atom 49:Atom 50:Atom 51:Atom 52:Atom 53:Atom 54:Atom 55:Atom  
56:Atom 61:CLASS62:CLASS64:CLASS66:CLASS67:CLASS68:CLASS69:CLASS70:CLASS71:CLASS  
73:CLASS74:CLASS75:CLASS



chain nodes :

7 8 9 10 11 12 13 14 15 16 25 26 27 28 35 36 41 43

ring nodes :

1 2 3 4 5 6 17 18 19 20 21 22 29 30 31 32 33 34

chain bonds :

1-7 2-10 3-8 5-9 10-11 10-25 11-12 11-13 11-26 13-14 13-27 14-15 15-16 15-28 28-41 28-43  
31-35

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 17-18 17-22 18-19 19-20 20-21 21-22 29-30 29-34 30-31 31-32 32-33  
33-34

exact/norm bonds :

1-2 1-6 1-7 2-3 2-10 3-4 3-8 4-5 5-6 5-9 10-25 11-12 11-26 13-14 13-27 14-15 15-16 15-28  
28-41 28-43

exact bonds :

10-11 11-13 31-35

normalized bonds :

17-18 17-22 18-19 19-20 20-21 21-22 29-30 29-34 30-31 31-32 32-33 33-34

G1:[\*1],[\*2],[\*3]

G2:CH3,Et,H

G3:H,[\*1],[\*2],[\*3]

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS8:CLASS9:CLASS10:CLASS11:CLASS12:CLASS13:CLASS14:CLASS15:CLASS16:CLASS17:Atom 18:Atom 19:Atom 20:Atom 21:Atom 22:Atom 25:CLASS26:CLASS27:CLASS28:CLASS29:CLASS30:CLASS31:CLASS32:Atom 33:Atom 34:Atom 35:CLASS36:CLASS41:CLASS43:CLASS

Generic attributes :

36:

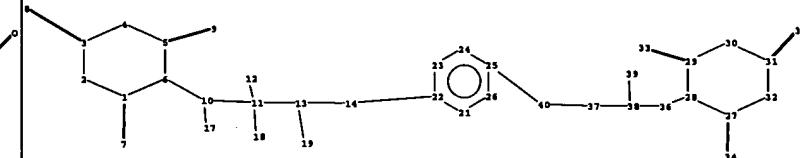
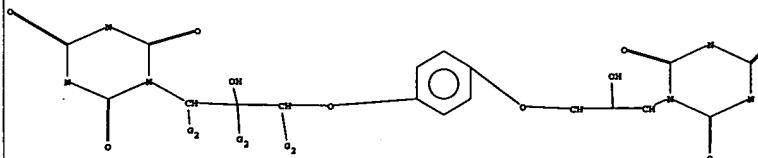
Saturation : Saturated

Number of Carbon Atoms : less than 7

Element Count :

Node 36: Limited

C,C1-6



chain nodes :

7 8 9 10 11 12 13 14 17 18 19 33 34 35 36 37 38 39 40

ring nodes :

1 2 3 4 5 6 21 22 23 24 25 26 27 28 29 30 31 32

chain bonds :

1-7 3-8 5-9 6-10 10-11 10-17 11-12 11-13 11-18 13-14 13-19 14-22 25-40 27-34 28-36 29-33  
31-35 36-38 37-38 37-40 38-39

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 21-22 21-26 22-23 23-24 24-25 25-26 27-28 27-32 28-29 29-30 30-31  
31-32

exact/norm bonds :

1-2 1-6 1-7 2-3 3-4 3-8 4-5 5-6 5-9 6-10 10-17 11-12 11-18 13-14 13-19 14-22 25-40 27-28  
27-32 27-34 28-29 28-36 29-30 29-33 30-31 31-32 31-35 37-40 38-39

exact bonds :

10-11 11-13 36-38 37-38

normalized bonds :

21-22 21-26 22-23 23-24 24-25 25-26

G1

G2:H,CH3,Et

Match level :

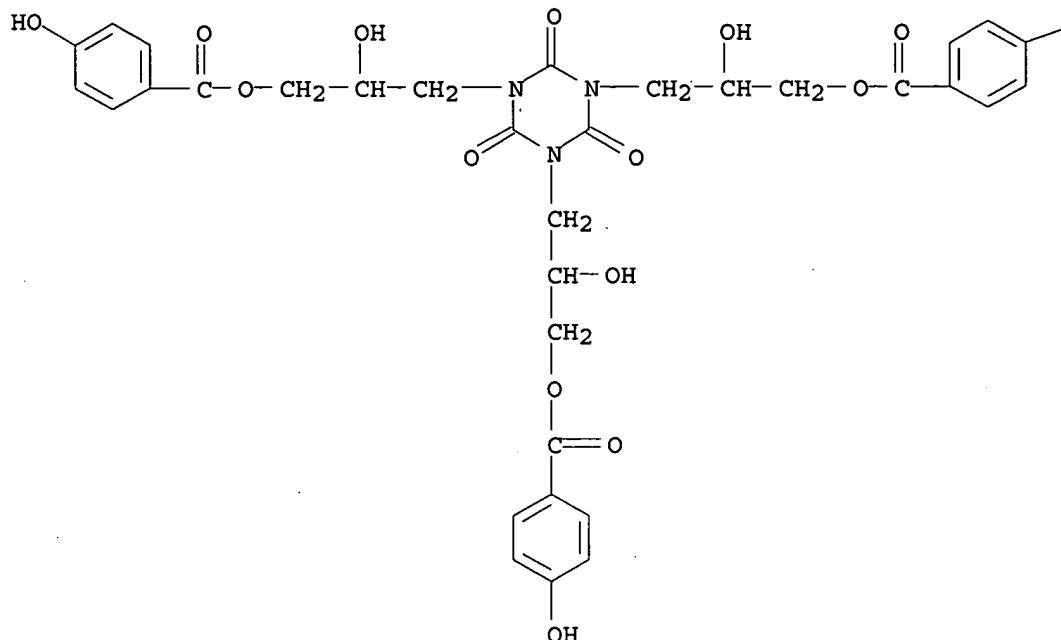
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13:CLASS14:CLASS17:CLASS18:CLASS19:CLASS21:Atom 22:Atom 23:Atom 24:Atom 25:Atom 26:Atom  
27:Atom 28:Atom 29:Atom 30:Atom 31:Atom 32:Atom 33:CLASS34:CLASS35:CLASS36:CLASS37:CLASS  
38:CLASS39:CLASS40:CLASS

L19 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2004:333991 CAPLUS  
 DN 140:359011  
 TI Bottom anti-reflective coatings derived from small core molecules with multiple epoxy moieties  
 IN Neef, Charles J.; Bhave, Mandar; Fowler, Michelle; Windsor, Michelle  
 PA Brewer Science, Inc., USA  
 SO PCT Int. Appl., 31 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004034435	A2	20040422	WO 2003-US332091	20031007
	WO 2004034435	A3	20050728		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2004110089	A1	20040610	US 2003-679521	20031006
	AU 2003282554	A1	20040504	AU 2003-282554	20031007
	EP 1573785	A2	20050914	EP 2003-774743	20031007
	EP 1573785	A3	20050921		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2006502448	T	20060119	JP 2004-543632	20031007
	CN 1739063	A	20060222	CN 2003-80104562	20031007
PRAI	US 2002-417214P	P	20021008		
	US 2003-679521	A	20031006		
	WO 2003-US32091	W	20031007		
OS	MARPAT 140:359011				
AB	Novel anti-reflective coatings comprising small mols. (e.g., less than about 5000 g/mol) in lieu of high mol. weight polymers and methods of using those coatings are provided. In one embodiment, aromatic carboxylic acids are used as the chromophores, and the resulting compds. are blended with a crosslinking agent and an acid. Anti-reflective coating films prepared according to the invention exhibit improved properties compared to high mol. weight polymeric anti-reflective coating films. The small mol. anti-reflective coatings have high etch rates and good via fill properties. Photolithog. processes carried out with the inventive material result in freestanding, 110-nm profiles. Thus, heating tris(2,3-epoxypropyl)isocyanurate 17.84 with 4-hydroxybenzoic acid 24.86, benzyltriethylammonium chloride 1.03 and propylene glycol Pr ether 384.3 g at 120° for 16 h under N and mixing the resulting mother liquor 20 with Powderlink 1174 (crosslinking agent) 0.50, p-toluenesulfonic acid 0.06 g, propylene glycol Pr ether 10.84 and Et lactate 28.84 g gave a coating which was coated on a wafer, baked at 205° for seconds, sprayed with Et acetate or propylene glycol monomethyl ether acetate and spin dried to give a coat film with good claimed properties.				
IT	681258-74-2P				
	RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)				
	(bottom anti-reflective coatings derived from small core mols. with multiple epoxy moieties)				
RN	681258-74-2 CAPLUS				
CN	Benzoic acid, 4-hydroxy-, (2,4,6-trioxo-1,3,5-triazine-1,3,5(2H,4H)-				

triyl)tris(2-hydroxy-3,1-propanediyl) ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

—OH

IT 681258-75-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(bottom anti-reflective coatings derived from small core mols. with multiple epoxy moieties)

RN 681258-75-3 CAPLUS

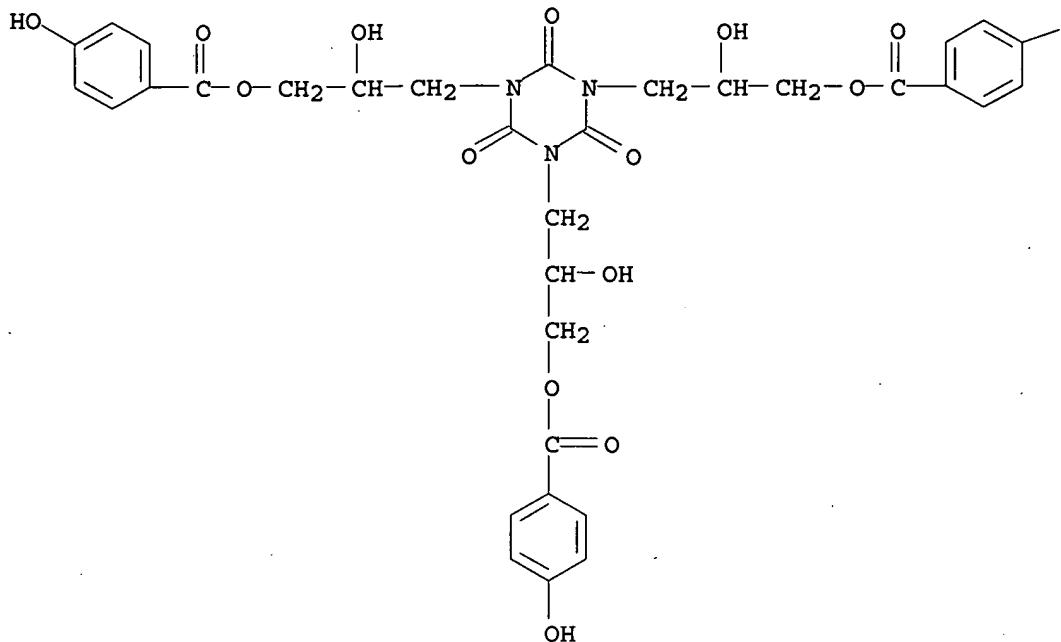
CN Benzoic acid, 4-hydroxy-, (2,4,6-trioxo-1,3,5-triazine-1,3,5(2H,4H,6H)-triyl)tris(2-hydroxy-3,1-propanediyl) ester, polymer with tetrahydro-1,3,4,6-tetrakis(methoxymethyl)imidazo[4,5-d]imidazole-2,5(1H,3H)-dione (9CI) (CA INDEX NAME)

CM 1

CRN 681258-74-2

CMF C33 H33 N3 O15

PAGE 1-A

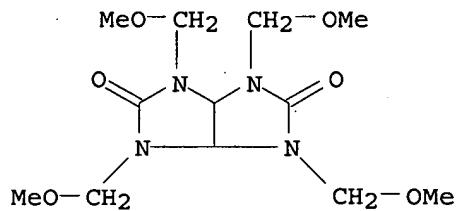


PAGE 1-B



CM 2

CRN 17464-88-9  
CMF C12 H22 N4 O6



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LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,  
OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,

TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2004110089 A1 20040610 US 2003-679521 20031006

AU 2003282554 A1 20040504 AU 2003-282554 20031007

EP 1573785 A2 20050914 EP 2003-774743 20031007

EP 1573785 A3 20050921  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

JP 2006502448 T 20060119 JP 2004-543632 20031007

CN 1739063 A 20060222 CN 2003-80104562 20031007

PRAI US 2002-417214P P 20021008  
US 2003-679521 A 20031006  
WO 2003-US32091 W 20031007

OS MARPAT 140:359011

AB Novel anti-reflective coatings comprising small mols. (e.g., less than about 5000 g/mol) in lieu of high mol. wt. polymers and methods of using those coatings are provided. In one embodiment, arom. carboxylic acids are used as the chromophores, and the resulting compds. are blended with a crosslinking agent and an acid. Anti-reflective coating films prep'd. according to the invention exhibit improved properties compared to high mol. wt. polymeric anti-reflective coating films. The small mol. anti-reflective coatings have high etch rates and good via fill properties. Photolithog. processes carried out with the inventive material result in freestanding, 110-nm profiles. Thus, heating tris(2,3-epoxypropyl)isocyanurate 17.84 with 4-hydroxybenzoic acid 24.86, benzyltriethylammonium chloride 1.03 and propylene glycol Pr ether 384.3 g at 120.degree. for 16 h under N and mixing the resulting mother liquor 20 with Powderlink 1174 (crosslinking agent) 0.50, p-toluenesulfonic acid 0.06 g, propylene glycol Pr ether 10.84 and Et lactate 28.84 g gave a coating which was coated on a wafer, baked at 205.degree. for seconds, sprayed with Et acetate or propylene glycol monomethyl ether acetate and spin dried to give a coat film with good claimed properties.

IT \*\*\*681258-74-2P\*\*\*

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(bottom anti-reflective coatings derived from small core mols. with multiple epoxy moieties)

RN 681258-74-2 CAPLUS

CN Benzoic acid, 4-hydroxy-, (2,4,6-trioxo-1,3,5-triazine-1,3,5(2H,4H,6H)-triyl)tris(2-hydroxy-3,1-propanediyl) ester (9CI) (CA INDEX NAME)

/ Structure 71 in file .gra /

/ Structure 72 in file .gra /

IT \*\*\*681258-75-3P\*\*\*

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(bottom anti-reflective coatings derived from small core mols. with multiple epoxy moieties)

RN 681258-75-3 CAPLUS

CN Benzoic acid, 4-hydroxy-, (2,4,6-trioxo-1,3,5-triazine-1,3,5(2H,4H,6H)-triyl)tris(2-hydroxy-3,1-propanediyl) ester, polymer with tetrahydro-1,3,4,6-tetrakis(methoxymethyl)imidazo[4,5-d]imidazole-2,5(1H,3H)-dione (9CI) (CA INDEX NAME)

CM 1

CRN 681258-74-2

CMF C33 H33 N3 O15

/ Structure 73 in file .gra /

EAST - [Untitled1:1]

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Drafts  
 BRS: jp-10207110-\$ did.  
 BRS:  
 Pending  
 Active  
 L1: (32462) ISOCYANURATE  
 L2: (24766) anti\$1reflective or antireflectivE  
 L3: (277) 1 AND 2  
 L4: (1) "679521".ap.  
 Failed  
 Saved  
 S3: (5) S1 and S2  
 S2: (24719) anti\$1reflective or antireflective  
 S1: (123) triazine adj trione  
 S4: (5) "679521".ap.  
 S6: (6) "417214".ap.  
 S5: (3) "569471".ap.  
 S13: (1) wo-2086624-\$ did.  
 S7: (586) isocyanurate near5 formula  
 S12: (0) wo-2086624-\$ did.  
 S11: (1) wo-2086624-\$ did.  
 S10: (0) wo-02086624-\$ did.  
 S9: (0) wo-088624-\$ did.  
 S8: (8) S4epoxypropylisocyanurate  
 S14: (0) ("20020055064"|"6284428"|"6316160").PN  
 S16: (17) ("20020055064"|"6284428T"|"6316160").PN  
 S17: (3) ("5693691"|"5919599"|"6323310").PN  
 S18: (5) ("20050175927"|"4874860"|"5250591"|"6306502"|"6440568").PN  
 S15: (23) ("20020055064"|"6284428T"|"6316160").PN  
 S21: (1) "6117618".pn.  
 S23: (2) jp-10207110-\$ did.  
 S22: (1) wo-2086624-\$ did.  
 S19: (1) "5935760".pn.  
 S20: (1) "6007618".pn.  
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 DB: US-PCPUB  
 Data Operator: OR  
 Goto Record: 679521.ap

Toolbar: BRS Form ATISAR Form Image Text HTML

REC	Document ID	Issue Date	Pages	Title	Current OR	Current XRef	Retrieval Class	Inventor	S1	C1	P1	3	Im
1	US 20040110089	20040610	11	Bottom anti-reflective coatings derived	430/271.1	430/280.1;		Neel, Charles J. et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Ready

10/530, 349, USpat, US-PCPUB, JPO, EPO, Derwent  
 IBMID, USACR, FPRS

3/1/07  
 3/2/07

RPA